xGen Exome Research Panel v2

Go ahead and commit. We made a lot.

Advance your clinical and companion diagnostics research with consistently deep coverage. The xGen Exome Research Panel v2 provides deep and even coverage of the human exome (Figure 1). Spanning 34 Mb of the human genome, the xGen Exome Research Panel v2 comprises 415,115 individually synthesized probes that are manufactured to ISO 13485 standards and individually assessed for quality control. By scaling the individual synthesis and quality control of each probe in the xGen Exome Research Panel v2, we minimize batch-to-batch variation, providing consistent results and decreasing the need for further sequencing and downstream verification (Figure 2).

benefits

The new standard for exome coverage

Consistent performance over time

Infinite possibilities for customization

Time and cost savings

Discover more at
www.idtdna.com/Exome

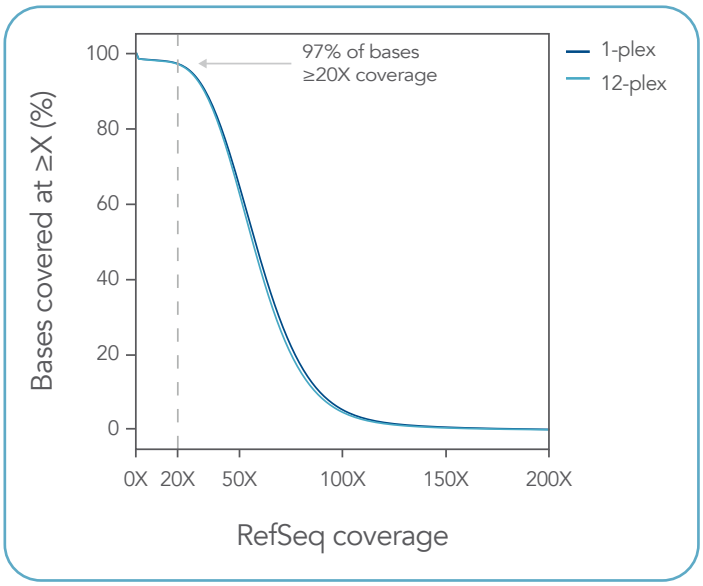

Figure 1. Highly uniform sequence coverage with xGen Exome Research Panel v2 leads to lower sequencing costs. DNA libraries were created from 100 ng of human genomic DNA (Coriell) using xGen Stubby Adapter and Unique Dual Index Primer Pairs with the Lotus DNA Library Prep Kit. These libraries were enriched either as 1-plex captures or in a single 12-plex capture using the xGen Exome Research Panel v2. The enriched libraries were sequenced (2x100) on a NextSeq® instrument (Illumina) and subsampled to 5 Gb. The data shows deep, uniform coverage with a flanked on-target rate of 94.7%, mean target coverage of 64.5X, and a duplication rate of 3.3% (calculated with Picard).

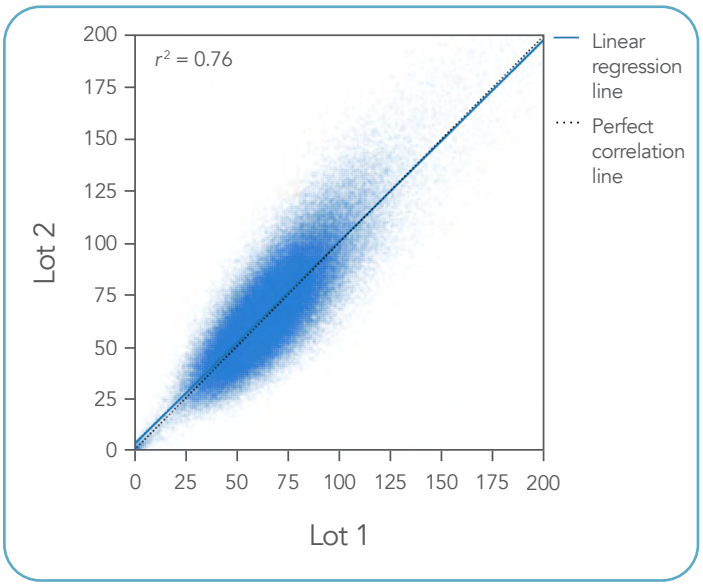

Figure 2. Limit expensive revalidation by having a large, single lot. 100 ng DNA was used to make libraries and were captured in 8-plex. Two different users performed the captures on different days in different locations. IDT's xGen Exome Research Panel v2 shows a linear regression line that mimics the predicted "perfect" correlation line with an r^2 value of 0.76.

More complete coverage

The advanced design algorithms used for the xGen Exome Research Panel v2, along with the most up-to-date RefSeq definitions, result in the most complete coverage of the human exome.

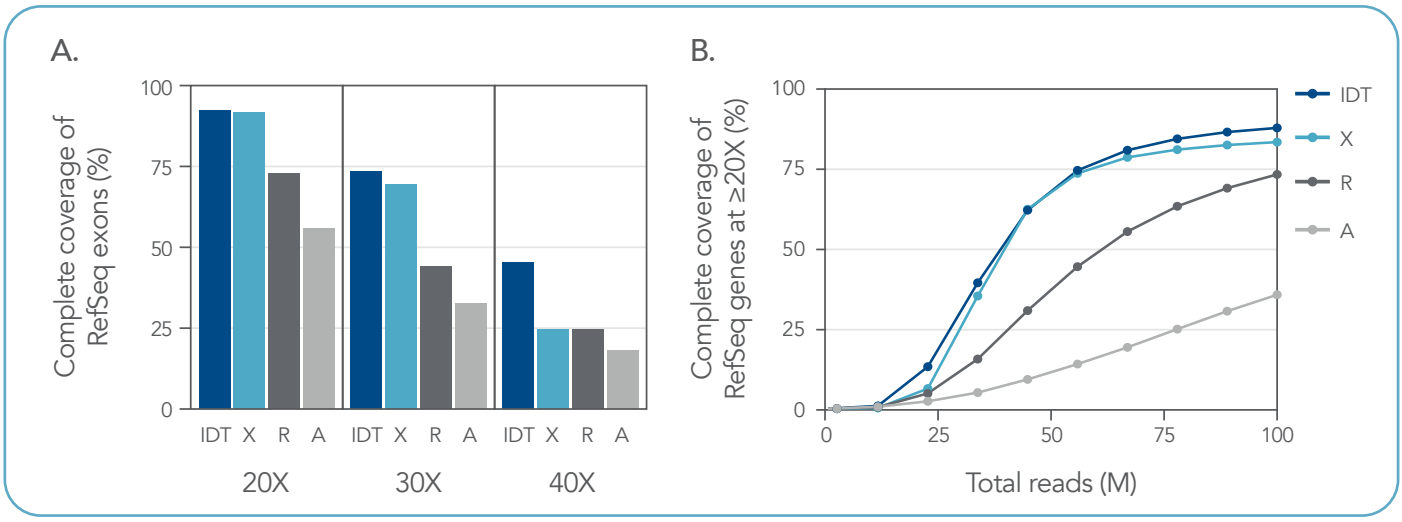

Figure 3. The most complete exome coverage is achieved with the xGen Exome Research Panel v2. (**A**) Enriched libraries were sequenced with 5 Gb per sample, and the percent of exons covered end-to-end at each read depth were calculated. IDT xGen Exome Research Panel v2 shows the highest percentage of exons covered at each indicated depth, compared to panels from suppliers X, R, and A. (**B**) The xGen Exome Research Panel v2 provides the most complete end-to-end gene coverage at ≥20X. Individual samples were subsampled at different read depths (2x100 bp read length). The percentage of genes that were covered for every base of every exon at ≥20X was calculated at each read depth and plotted.

Achieve more efficient sequencing and save costs

The xGen Exome Research Panel v2 provides deeper coverage for the same amount of reads, allowing you to reduce sequencing costs.

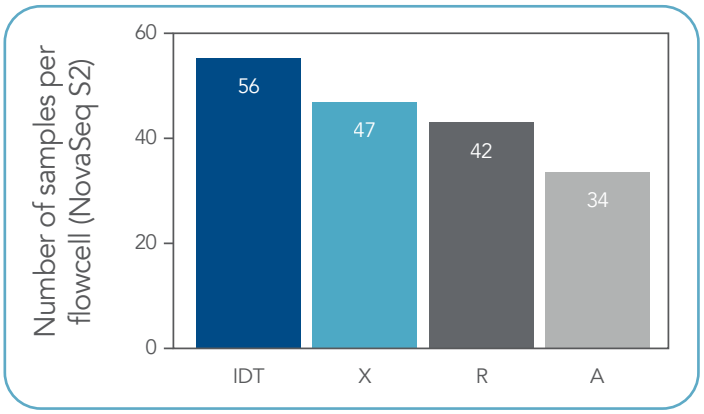

Figure 4. The xGen Exome Research Panel v2 reduces sequencing costs. DNA libraries were created from 100 ng of human genomic DNA (Coriell) using xGen Stubby Adapter and Unique Dual Index Primer Pairs with the Lotus DNA Library Prep Kit. These libraries were enriched either as 8-plex (competitor) or 12-plex (IDT) captures. The enriched libraries were sequenced (2x100) on a NextSeq instrument (Illumina), and the number of reads required to achieve 75X mean target coverage (Picard) per sample was calculated. The number of samples that would fit on a NovaSeq™ S2 flowcell (Illumina) was calculated.

Ordering information

Product	Size	Catalog #
xGen Exome Research Panel v2	4 rxn	10005151
	16 rxn	10005152
	96 rxn	10005153

For more information and to order, visit www.idtdna.com/Exome

For Research Use Only. Not for use in diagnostic procedures.

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